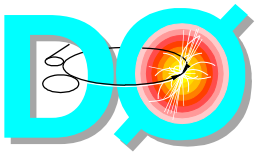


Forward Muon System Status

Dmitri Denisov

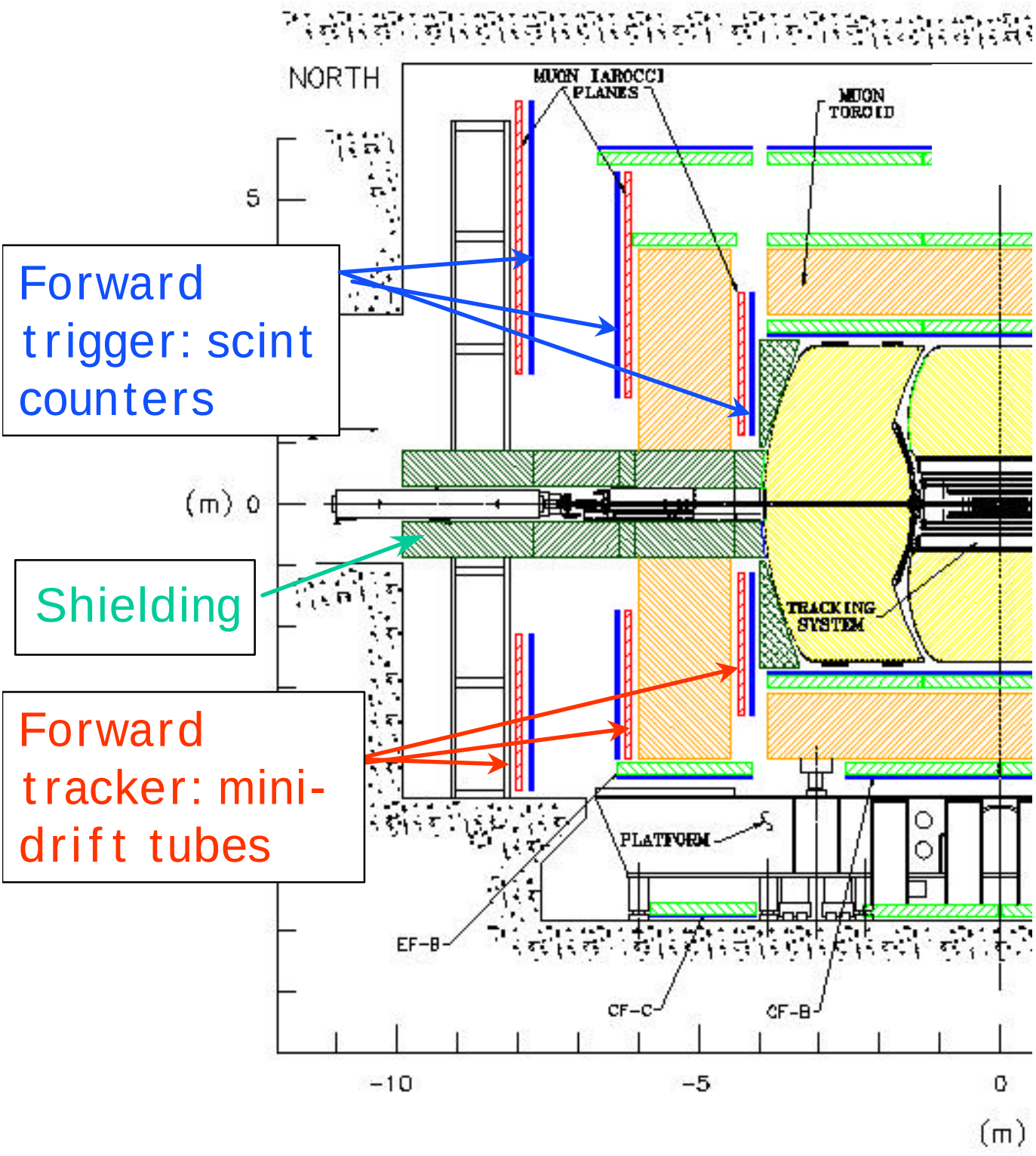
Fermilab

for the

D0 Forward Muon Upgrade Group

PMG December 2 1999

Forward Muon Detector Upgrade



Completely new forward muon system for Run II

Forward Muon Trigger System Status

- All parts for all 48 octants are at Fermilab
- 43 out of 48 frames are made, all done by Christmas
- Calibration system modules production: keeping pace with octants assembly
- 28 out of 48 octants assembled
- Within 1 week on schedule, finishing C layer in ~10 days
- Critical items:
  - B layer drill fixture
  - start active engineering design for installation

Forward Muon Tracking Status

- All 2300 mini-drift tubes for A layer are tested at Fermilab
- All C layer tubes are at Fermilab, longest (~6m) tubes are tested, failure rate within 1-2%
- Production of tubes at Dubna is in a mixed shape (see plot)
- Assembly of A octants:
  - test results of first octant are OK
  - all changes to drawings are done
  - parts from vendors are received
  - parts modifications is in progress
  - re-assembling first octant today
  - 2 more octants are already in a queue
- Critical items:
  - inventory of parts for mass assembly
  - Fermilab techs manpower and JINR visitors presence
  - last frames for A layer
  - Availability of drawings and parts for B/C layers (honeycomb, etc.)

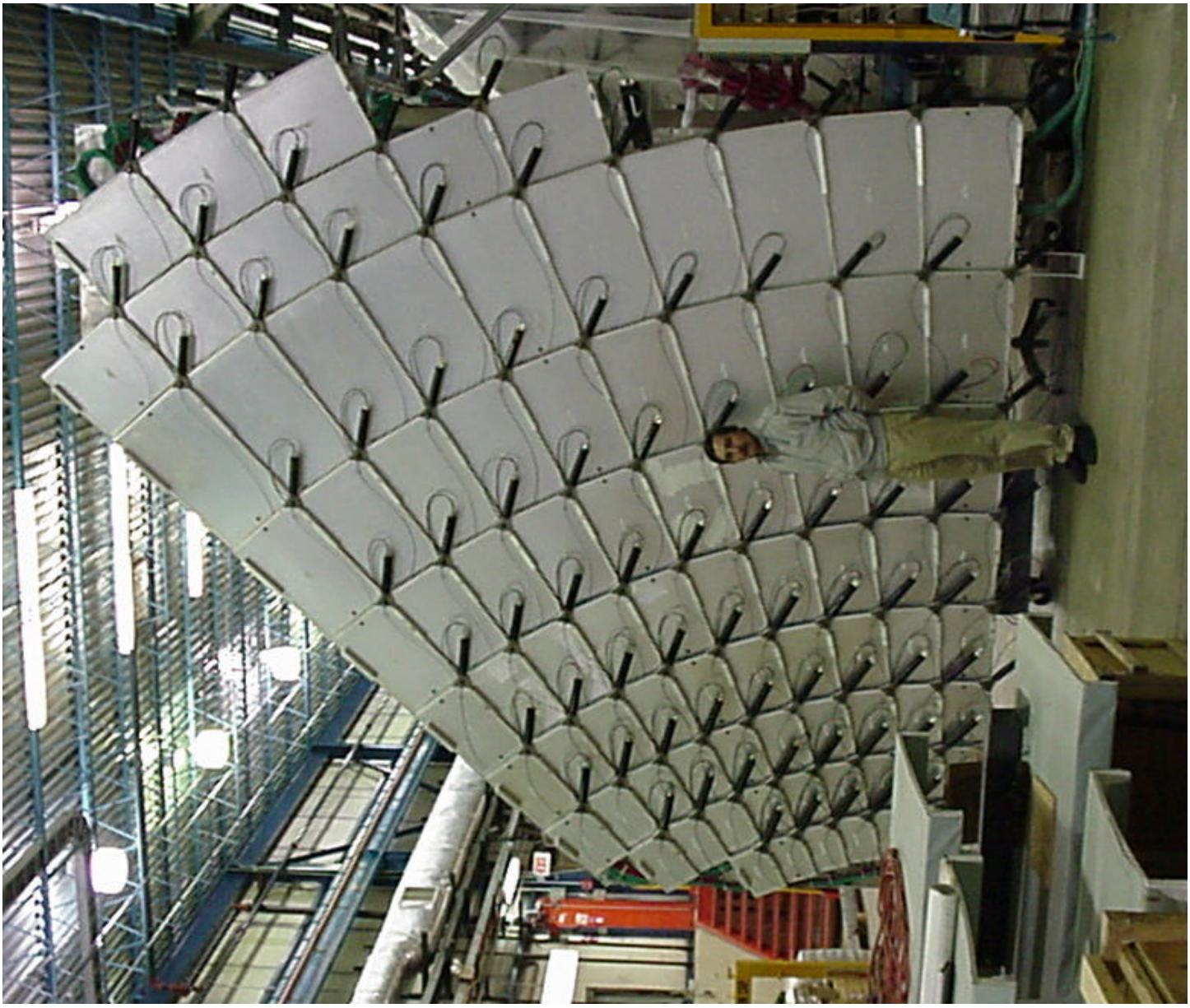
Installation and commissioning manpower

- **Pixels:**
  - **2 engineers and 2 drafters for ~8 months**
  - **4 techs for ~10months**
  - **electronics/software support: 2 engineers/physicists till roll in**
  - **4 physicists for commissioning: starting April till roll in**
- **MDTs:**
  - **2 engineers and 2 drafters for ~8 months**
  - **4 techs for ~10months**
  - **electronics/software support: 2 engineers/physicists till roll in**
  - **5 physicists for commissioning: starting March till roll in**
- **Infrastructure**

MDT Octant Assembly

Forward Muon Trigger C Layer Octant Assembly

- Counters mounting hardware, cables and calibration system installed

C Layer Assembled Octant

- **Assembled octant in test area:**